

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/11403

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ B41M5/40

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ B41M5/26-40Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Toroku Jitsuyo Shinan Koho 1994-2003
Kokai Jitsuyo Shinan Koho 1971-2003 Jitsuyo Shinan Toroku Koho 1996-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 5593938 A (Fuji Photo Film Co., Ltd.), 14 January, 1997 (14.01.97), Column 7, lines 23 to 48; column 13, line 24 to column 15, line 20; column 17, lines 25 to 46 & JP 7-314898 A	1, 2, 18, 19 3-17
X Y	JP 10-193796 A (Ricoh Co., Ltd.), 28 July, 1998 (28.07.98), Par. Nos. [0013] to [0015], [0038] to [0040], [0050] to [0051] (Family: none)	1, 2, 18, 19 3-17
Y A	EP 1208995 A2 (Ricoh co., Ltd.), 29 May, 2002 (29.05.02), Claim 18; Par. Nos. [0064], [0114] & JP 2002-219872 A	1, 2, 18, 19 3-17

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:
 "A" document defining the general state of the art which is not
 considered to be of particular relevance
 "E" earlier document but published on or after the international filing
 date
 "L" document which may throw doubts on priority claim(s) or which is
 cited to establish the publication date of another citation or other
 special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other
 means
 "P" document published prior to the international filing date but later
 than the priority date claimed

"T" later document published after the international filing date or
 priority date and not in conflict with the application but cited to
 understand the principle or theory underlying the invention
 "X" document of particular relevance; the claimed invention cannot be
 considered novel or cannot be considered to involve an inventive
 step when the document is taken alone
 "Y" document of particular relevance; the claimed invention cannot be
 considered to involve an inventive step when the document is
 combined with one or more other such documents, such
 combination being obvious to a person skilled in the art
 "&" document member of the same patent family

Date of the actual completion of the international search
05 December, 2003 (05.12.03)Date of mailing of the international search report
24 December, 2003 (24.12.03)Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	JP 9-193551 A (Ricoh co., Ltd.), 29 July, 1997 (29.07.97), Claim 6; Par. Nos. [0013], [0035] to [0038], [0054], [0055] (Family: none)	1,2,18,19 3-17
Y A	US 5883042 A (Agfa-Gevaert), 16 March, 1999 (16.03.99), Column 2, line 29 to column 3, line 20; column 4, lines 42 to 62; column 5, lines 58 to 63; column 19, lines 43 to 63; column 22, table 2 & JP 10-95170 A Par. Nos. [0011], [0116], [0127]	1,2,3,18,19 4-17
P,X P,Y	JP 2002-331752 A (Fuji Photo Film Co., Ltd.), 19 November, 2002 (19.11.02), Par. No. [0122] (Family: none)	1,2,3,18,19 4-17
P,X P,Y	JP 2002-331753 A (Fuji Photo Film Co., Ltd.), 19 November, 2002 (19.11.02), Par. No. [0121] (Family: none)	1,2,3,18,19 4-17
E,X E,Y	JP 2003-266943 A (Fuji Photo Film Co., Ltd.), 25 September, 2003 (25.09.03), Par. Nos. [0100] to [0105] (Family: none)	1,2,3,18,19 4-17
E,X E,Y	JP 2003-276329 A (Fuji Photo Film Co., Ltd.), 30 September, 2003 (30.09.03), Par. Nos. [0149] to [0152] (Family: none)	1,2,3,18,19 4-17
Y	US 5919729 A (Ricoh Co., Ltd.), 06 July, 1999 (06.07.99), Full text & JP 9-263049 A	3-5
Y	US 5409881 A (Ricoh Co., Ltd.), 25 April, 1995 (25.04.95), Full text & JP 5-318926 A	3-5
Y	JP 6-32056 A (Ricoh Co., Ltd.), 08 February, 1994 (08.02.94), Full text (Family: none)	3-5
Y	JP 9-220857 A (Ricoh Co., Ltd.), 26 August, 1997 (26.08.97), Full text (Family: none)	3-5

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 7-290822 A (Oji Paper Co., Ltd.), 07 November, 1995 (07.11.95), Par. Nos. [0028], [0034]; full text (Family: none)	5-8
Y	JP 9-226252 A (Oji Paper Co., Ltd.), 02 September, 1997 (02.09.97), Claim 1; Par. No. [0012] (Family: none)	6-8
Y	JP 10-157299 A (Fuji Photo Film Co., Ltd.), 16 June, 1998 (16.06.98), Claim 3; Par. Nos. [0090], [0091] (Family: none)	9-13
Y	JP 11-115311 A (Oji Paper Co., Ltd.), 27 April, 1999 (27.04.99), Par. Nos. [0024], [0026], [0043], [0044] (Family: none)	6,9-13
Y	JP 11-70735 A (Fuji Photo Film Co., Ltd.), 16 March, 1999 (16.03.99), Claims 1, 2 (Family: none)	9-13,16
P,A	JP 2002-301868 A (Oji Paper Co., Ltd.), 15 October, 2002 (15.10.02), Full text (Family: none)	6,9-13
Y	JP 2000-6520 A (Oji Paper Co., Ltd.), 11 January, 2000 (11.01.00), Full text (Family: none)	14-17
A	JP 9-175019 A (Oji Paper Co., Ltd.), 08 July, 1997 (08.07.97), Full text (Family: none)	1-13
P,A	JP 2003-127543 A (Oji Paper Co., Ltd.), 08 May, 2003 (08.05.03), Full text (Family: none)	1-13
P,A	JP 2002-326456 A (Oji Paper Co., Ltd.), 12 November, 2002 (12.11.02), Full text (Family: none)	1-13

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Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:

because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:

because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:

because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

(see extra sheet)

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.

☒ No protest accompanied the payment of additional search fees.

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Continuation of Box No. II of continuation of first sheet(1)

The matter common to claims 1 to 19 is, as is described in claim 1, "A thermal recording material, which comprises (a) a transparent film, (b) a thermal recording layer which is formed on one surface of said transparent film and comprises an electron donating compound, an electron accepting compound and an adhesive, (c) a protective layer which is formed on said thermal recording layer and comprises an aqueous resin defined in the specification as a primary component, and (d) a backing layer which is formed on the other surface of said transparent film and comprises a pigment and an adhesive, wherein the backing layer contains spherical resin particles having a volume average particle diameter of 2 to 15 μm in an amount of 0.2 to 5.0 mass % relative to the backing layer". A search has revealed that this common matter (the thermal recording material according to claim 1) is not novel, because it is described in documents US 5593983 A (Fuji Photo Co., Ltd) 14 January, 1997 (14.01.97) and JP 10-193796 A (Ricoh Co., Ltd.) 28 July, 1998 (28.04.98).

This common matter 1 is not a special technical feature in the meaning of PCT Rule 13. 2, the second sentence.

Therefore, there is no matter being common to all the claims.

Since there is no other matter which is common to all the claims and is considered to be a special technical feature in the meaning of PCT Rule 13. 2, the second sentence, there is no special technical feature in the meaning of PCT Rule 13. 2, the second sentence, among those different inventions. Therefore, the technical linkage in the meaning of PCT Rule 13. 1 cannot be found among those different inventions.

Accordingly, claims 2 to 19 describe the following seven inventions:

1. claim 2; the thermal recording material according to claim 1, wherein said backing layer has a specified average thickness,
2. claims 3 to 5; the thermal recording material according to claim 1, wherein said backing layer contains a specified adhesive,
3. claims 6 to 8; the thermal recording material according to claim 1, wherein said preventive layer contains a specified adhesive,
4. claims 9 to 13; the thermal recording material according to claim 1, wherein said preventive layer contains a specified type of lubricating agent or the like,
5. claims 14 to 17; the thermal recording material according to claim 1, wherein said thermal recording layer contains a specified type of adhesive or the like,
6. claim 18; the thermal recording material according to claim 1, wherein said transparent film has a specified range of thickness, and
7. claim 19; the thermal recording material according to claim 1, wherein

said material has a limited range of haze.

The international search was carried out for the inventions 1 and 2 firstly described, and a partial search report for claims 18 and 19 was also prepared

before the request of an additional fee, since the additional search could be done with a little additional burden.